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NATIONAL COMMUNICABLE DISEASE CENTER

Morbidity and Mortality

Vol. 18, No. 18

WEEKLY REPORT

For Week Ending May 3, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE / HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DATE OF RELEASE: MAY 9, 1969 – ATLANTA, GEORGIA 30333

EPIDEMIOLOGIC NOTES AND REPORTS

SUSPECT HUMAN RABIES – San Diego County, California

On April 1, 1969, a 2½-year-old boy from Lakeside, San Diego County, California, received deep bites on the lower extremity and suboccipital area of the head in an unprovoked attack by a bobcat. The animal was killed and central nervous system tissue was positive for rabies virus by both direct microscopic and fluorescent antibody examination. On the day he was bitten, the boy was started on post-exposure prophylaxis treatment with duck embryo vaccine. He received 2 doses per day for 7 days, single daily doses on 7 subsequent days, and a booster dose on the 21st and 31st days. Rabies hyperimmune serum was not administered.

On April 18, the boy developed an illness characterized initially by fever and periods of lethargy. On April 24, he was admitted to a hospital where he was alert, but had flaccid paralysis of both lower extremities. A white blood cell count that day was 13,200 with 65 percent polymorphonuclears, 24 percent lymphocytes, and

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TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	18th WEEK ENDED		MEDIAN	CUMULATIVE, FIRST 18 WEEKS		
	May 3, 1969	May 4, 1968	1964 - 1968	1969	1968	MEDIAN 1964 - 1968
Aseptic meningitis	24	35	32	514	519	504
Brucellosis	–	3	3	37	49	72
Diphtheria	4	–	1	48	65	65
Encephalitis, primary:						
Arthropod-borne & unspecified	21	12	24	353	278	439
Encephalitis, post-infectious	9	30	19	96	187	282
Hepatitis, serum	112	78	755	1,823	1,344	14,899
Hepatitis, infectious	885	796		16,586	15,038	
Malaria	36	36	9	834	762	100
Measles (rubeola)	949	706	8,257	11,549	12,018	134,318
Meningococcal infections, total	77	61	61	1,573	1,314	1,314
Civilian	69	55	- - -	1,428	1,185	- - -
Military	8	6	- - -	145	129	- - -
Mumps	2,457	4,905	- - -	44,308	89,654	- - -
Poliomyelitis, total	–	3	1	1	18	7
Paralytic	–	3	1	1	18	6
Rubella (German measles)	2,511	2,522	- - -	26,350	25,875	- - -
Streptococcal sore throat & scarlet fever	10,281	8,499	8,822	203,921	199,008	199,008
Tetanus	1	1	2	35	36	54
Tularemia	1	3	2	31	25	52
Typhoid fever	12	7	7	83	85	110
Typhus, tick-borne (Rky. Mt. spotted fever)	5	3	1	10	11	11
Rabies in animals	80	98	98	1,413	1,385	1,611

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: N.J.-1	1	Rabies in man:	–
Botulism:	9	Rubella congenital syndrome: Minn.-1	5
Leptospirosis:	14	Trichinosis: N.J.-2, N.Y. Ups.-1	31
Plague:	–	Typhus, murine:	5
Psittacosis: Conn.-1	10		

SUSPECT HUMAN RABIES — *(Continued from front page)*

9 percent monocytes. Cerebrospinal fluid contained 251 leukocytes with 131 polymorphonuclears and 120 mononuclears. The protein was 70 mg percent. Over the next 2 days, progression of paralysis occurred with involvement of the upper extremities. Deep tendon reflexes were reduced during this period. At no time was there difficulty in ingesting liquids or solid foods. Sensory changes did not occur and he remained alert. On April 26 and 27, he developed stupor and then coma. Four days later, spontaneous respirations ceased. As of May 7, he was comatose and areflexic and his breathing was maintained by a respirator.

An indirect fluorescent antibody titer and tissue culture neutralization titer on serum obtained on April 25 were 1:64 and 1:32, respectively, for rabies. Viral cultures of saliva, stool, urine, cerebrospinal fluid, and endotracheal washings are in progress.

The boy's home is located on a family chicken farm in a small community about 20 miles north of the Mexican border. This area is on the periphery of a region where an epizootic of rabies was recognized in 1966. In that year, 63 rabid animals were identified by the San Diego County health authorities; in 1967, 34; and in 1968, 11. Between 1966 and July 1968, 6,563 animals were trapped in a program to decrease animal populations. In the first 4 months of 1969, two bobcats and one coyote were found to be rabid.

(Reported by James Chin, M.D., Head, Epidemiology and Richard Emmons, M.D., Public Health Medical Officer, Bureau of Communicable Diseases, California Department of Public Health; J.B. Askew, M.D., Health Director, and Donald Romras, M.D., Assistant Health Director, San Diego County Health Department; V. Robert Allen, M.D., Attending Pediatrician, and Edwin Pratas, M.D., Pediatric Resident, University Hospital of San Diego County; and an EIS Officer.)

AN OUTBREAK OF ACUTE GASTROENTERITIS DURING A TOUR OF THE ORIENT — Alaska

At 3:30 a.m. on May 4, 1969, an international flight en route from Tokyo to Seattle, Washington, made an emergency landing at Anchorage, Alaska, after 21 of 42 elderly persons returning to the United States from a tour of the Orient developed gastroenteritis. During the 15 hours before the onset of symptoms, the tour group had traveled from Bangkok to Tokyo on another airline with an overnight stop in Hong Kong. On that flight dinner was served before the stop in Hong Kong, and breakfast after the stop, 10 and 4 hours, respectively, before the outbreak. Retrospectively, illness was noted during the stopover in Hong Kong when at least two persons developed lower abdominal cramping and diarrhea. Within 2 hours after departure from Hong Kong for Tokyo, additional persons developed similar symptoms. The remainder of the ill tourists noted onset of symptoms shortly after embarking for the United States from Tokyo. Nausea and vomiting were also reported, but fever, chills, and bloody diarrhea were not.

One of the ill tourists, a 71-year-old woman, died 2 hours after the plane departed from Tokyo. Postmortem examination revealed no gross lesions within the stomach, large or small intestines. Another ill person was admitted to the Anchorage hospital and made a gradual recovery during the next 36 hours. The other 19 persons became asymptomatic within 12 hours after the onset of symptoms.

Food histories and bacteriologic cultures are now being processed. Initial epidemiologic studies suggest a foodborne outbreak, but the exact meal and etiology have not been determined.

(Reported by Donald K. Freedman, M.D., Director, Division of Public Health, Alaska Department of Health and Welfare; Byran J. Francis, M.D., M.P.H., Chief, Division of Epidemiology, Washington State Department of Health; the Foreign Quarantine Program, NCDC; and a team of EIS Officers.)

SURVEILLANCE SUMMARY
DIPHTHERIA – United States 1967

A total of 219 diphtheria cases and 181 carriers were reported to the NCDC in 1967. Surveillance reports were received on 214 of these cnses. For 1967, the diphtherin incidence and mortality rntes and case fatality ratio remnined relatively constnnt compnred with 1965 and 1966 (Table 1) (Figure 1). In 1966 and 1967, the incidence of diphtheria in the South increased, while incidence rates for the North and West continued to decline slightly. The highest attack rates were 1.50 in Louisiana, 0.62 in Alabama, and 0.60 in Texas. Attack rates in the other states were 0.30 or less, and 24 states reported no cases. Diphtheria continued to be most prevalent in the autumn: 115 of 203 cases (56.7 percent) with known dates of onset occurred in Septemher, October, and November. The next highest number of cases occurred in December and January. Seasonal variation was present in the South but could not be reliahly appraised for the North and West, because of the small numher of cases.

The age distribution for the diphtheria cases and deaths was not significantly different from age distributions for the years 1959-1966. In 1967, 82 percent of cases were in persons under 15 years of age and 61 percent of patients were under 10. Of the 214 cases, 117 occurred in nonwhites or 10 times the rate for whites (0.57 and 0.06, respectively); 54 percent of all cases were in females. The incidence rates for all age groups and both sexes were uniformly higher for nonwhites than for whites.

When cases were classified as to clinical severity of disease, 48 percent were mild, 28 percent moderate, 10 percent severe, and 14 percent fatal (Tahle 2). Immunization histories were available for 179 cases. There were no deaths among persons who had completed a primary immunization series. The case fatality ratios for those with inadequate or no immunization were comparable (Table 3).

Diphtheria was confirmed by culture in 182 of the 214 cases, but only 95 isolates were typed: 76 percent were mitis type, and 18 percent of patients with mitis type

(Continued on page 152)

Figure 1
DIPHTHERIA – REPORTED ANNUAL INCIDENCE AND MORTALITY RATES, AND CASE FATALITY RATIO UNITED STATES, 1920-1967

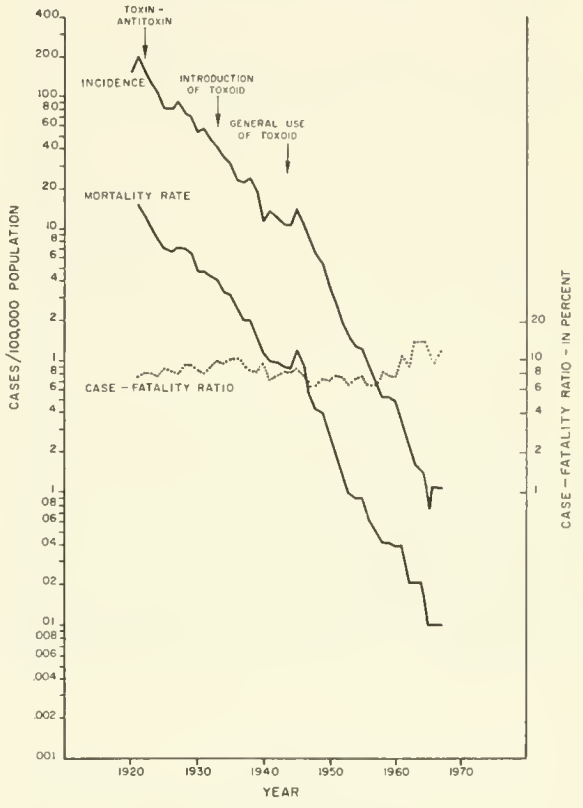


Table 1
Diphtheria Morbidity and Mortality in the United States for Selected Yeor, 1933-1967

Year	Cases	Deaths	Rates per 100,000 Population*		Case Fatality Ratio
			Incidence	Mortality	
**1933	50,462	4,937	40.1	3.9	9.8
1940	15,536	1,457	11.8	1.1	9.4
1950	5,796	410	3.8	.3	7.1
1960	918	69	.51	.04	7.5
1961	617	68	.34	.04	11.0
1962	444	41	.24	.02	9.2
1963	314	45	.17	.02	14.3
1964	293	42	.15	.02	14.3
1965	164	18	.08	.01	11.0
1966	209	20	.11	.01	9.6
1967	219	25	.11	.01	11.4

Sources of Data:
1. Cases – Annual Summaries, Notifiable Diseases, National Office of Vital Statistics (NOVS) and NCDC.
2. Deaths – 1933-1961 National Summaries, NOVS; 1962-1966 Vital Statistics of the United States, NCHS; 1967, Preliminary Data, based on surveillance reports to Special Pathogens Section, NCDC.

*Based on population data from the Bureau of Census Population Estimates; 1933 and 1940, Series P-25, No. 139; 1950, Series P-25, No. 165; 1960-1962, Series P-25, No. 259; 1963, Series P-25, No. 273; 1964-1966, Series P-25, No. 369; 1967, Series P-25, No. 380.

**The first year of complete registration.

DIPHTHERIA – *(Continued from page 151)*

organisms died (Table 4); 12 percent were gravis strains and included one death. No deaths were reported in patients with intermedius and indeterminate type organisms. For the years 1959-1967, mitis strains accounted for 796 (59 percent) and gravis strains for 333 (24 percent) of the 1,347 typed isolates. For the 9-year period, mitis strains of *Corynebacterium diphtheriae* accounted for the majority of isolates in the North and the South (63 and 76 percent, respectively); in the West, gravis strains were isolated much more frequently and were responsible for the majority of cases (68 percent).

In 1967, 45 percent of the gravis isolates were toxigenic, concurring with 1965 (35 percent) and 1966 (44 percent) whereas during 1959-1964, 96 percent of gravis strains were toxigenic with no significant yearly differences.

Surveillance data on the 181 reported diphtheria carriers showed the age distribution of carriers to be comparable with that of cases: 131 of the carriers were nonwhites and 107 were females. Approximately one-third of the carriers were fully immunized. Presumably most carriers were detected during culture surveys of contacts of clinical cases. Toxigenicity of isolates from 175 of the 181 carriers was measured and 63 percent were nontoxigenic compared with 10.8 percent nontoxigenic isolates from cases.

Table 2
Diphtheria Cases – by Toxigenicity and Clinical Severity*
United States, 1959-1967

Severity	No. of Cases Toxigenic	Percent Toxigenic	No. of Cases Nontoxigenic	Percent Nontoxigenic	Total No. of Cases	Percent of Total
Mild	766	87.8	106	12.2	872	49.5
Moderate	460	92.9	35	7.1	495	28.1
Severe	198	96.1	8	3.9	206	11.7
Fatal	187	100.0	---	----	187	10.6
Total	1,611	91.5	149	8.5	1,760	100.0

*Excludes cases where toxigenicity or severity unknown.

Table 3
Diphtheria Cases by Immunization Status*
United States, 1967

Reported Immunization Status	Cases	Percent of Cases	Fatal Cases	Case Fatality Ratio
FULL – Primary series plus booster within 4 years	20	11.2	0	----
LAPSED – Primary series but no booster within past 4 years.	14	7.8	0	----
INADEQUATE – Uncompleted primary series	26	14.5	4	15.4
NONE	119	66.5	17	14.3
Total	179	100.0	21	11.7

*Excludes patients where immunization status is unknown. Definitions of immunization status have been modified from above starting 1969 and are listed below:

Immunization Status

Full	Primary series (three or more injections), or a primary series plus a booster, completed within 10 years of onset of illness.
Lapsed	Primary series, or a primary series plus booster, completed more than 10 years prior to onset.
Inadequate	Uncompleted primary series at any time prior to onset.
None	No diphtheria toxoid had ever been received prior to onset.

Table 4
Diphtheria – Cases and Deaths by *Corynebacterium diphtheriae* Type
United States, 1967*

	Number of Cases		Number of Deaths	Case Fatality Ratio**
	Known Outcome	Unknown Outcome		
Mitis	61	11	11	18.0
Gravis	9	2	1	11.1
Intermedius	9	0	0	----
Indeterminate	1	2	0	----
Total	80	15	12	15.0

*Excludes cases where type unknown or no isolate obtained.
**Based on cases of known outcome.

(Reported by the Special Pathogens Section, Bacterial Diseases Branch, and Statistics Section, Epidemiology Program, and Diphtheria Laboratory, Bacterial Immunology Unit, Laboratory Division, NCDC.)

A copy of the original report from which these data were derived is available on request from:

National Communicable Disease Center
Atlanta, Georgia 30333
Attn: Chief, Special Pathogens Section
Bacterial Diseases Branch, Epidemiology Program

PREVENTIVE TREATMENT FOR TUBERCULOUS INFECTION

Recommendations of the National Communicable Disease Center

Most active tuberculosis in the United States today occurs among persons who were infected with *Mycobacterium tuberculosis* many years ago.

Because these persons, who are positive tuberculin reactors, comprise the reservoir of future tuberculosis in this country, special priority on preventing this progression from latent to active disease should be an essential element in modern tuberculosis control programs.

Research conducted during the past decade has established that treatment with isoniazid can greatly reduce the risk of active tuberculosis developing among tuberculin reactors.

Today, the U.S. Public Health Service, the American Thoracic Society, and the National Tuberculosis and Respiratory Disease Association, recommend isoniazid for *persons identified as having tuberculous infection.*

Priority Candidates for Preventive Treatment

While all infected persons may benefit from preventive treatment, priority effort should be made to identify and treat individuals in the following groups:

1. Positive tuberculin reactors with "pulmonary fibrosis" or old fibrotic lesions presumably tuberculous in origin, former tuberculosis patients who have never had specific chemotherapy or who have had inadequate drug therapy (e.g., treatment for less than 18 months, no isoniazid, etc.). At particularly high risk are persons with pulmonary lesions of unknown etiology, compatible with tuberculosis, in which active disease has been excluded.

2. Members of the household of a newly diagnosed case of tuberculosis, regardless of tuberculin status. Preventive treatment for these household contacts should continue for a full year, even when exposure to the infectious case has ended and tuberculin tests remain negative. Preventive treatment of negative reactors should also be given other persons who have had close, extended exposure comparable to that of a person living in the same household with an active case.

3. Persons known to have recently become infected, i.e., converted from negative to positive tuberculin reaction.

4. Children who are reactors through the age of adolescence.

5. School personnel and other adult reactors closely associated with children.

6. Tuberculin reactors in certain clinical situations known to lessen their resistance to disease: prolonged corticosteroid treatment, gastrectomy, leukemia, silicosis, Hodgkins' disease, pneumoconiosis, severe or poorly controlled diabetes, pregnancy, and children with measles or whooping cough. In the case of pregnant women, treatment should be started in the *last trimester.*

Isoniazid for Preventive Treatment

A single drug, isoniazid, is generally used for treatment of infection in a dosage of 300 mg. per day for adults and 10 mg. per kilogram body weight for children not to exceed 300 mg. per day, to be administered daily for a period of 12 months.

Effectiveness of Isoniazid

Public Health Service trials that started in 1955 among high risk groups such as infected children, household contacts of an active case, and persons with fibrotic lesions in their lungs, have shown a continued reduction in subsequent cases of tuberculosis ranging from 55 to 85 percent after one year of isoniazid. These reductions tend to minimize the effectiveness of isoniazid since some individuals in the groups studied failed to take the medication daily.

Interpretation of Tuberculin Tests

Positive Reaction = 10 mm or more of induration

A reaction of 10 mm or more induration to the Mantoux test, using 5 TU of PPD, represents infection with *Mycobacterium tuberculosis.* No confirmation test necessary.

"Doubtful" Reaction = 5 mm through 9 mm of induration

Reactions within this range can result from infection with any one of a number of mycobacteria, including *M. tuberculosis.* Clarification may be obtained either by repeating the test with PPD-tuberculin at a different site or by simultaneous testing with PPD-tuberculin and another mycobacterial PPD, if available.

Negative Reaction = 0 mm through 4 mm of induration

No repeat test necessary unless there is other suggestive clinical evidence of tuberculosis.

CURRENT TRENDS

MEASLES – United States

For the first 28 weeks of Measles Epidemiologic Year 1968-69*, 12,088 cases of measles were reported to the NCDC. This is 84 percent of the total cases reported for the first 28 weeks of the preceding epidemiologic year (1967-68) and is 51 percent of all cases reported for that entire epidemiologic year (Figure 2).

During the first 16 weeks of 1969, 9,615 cases of measles were reported. This is 92 percent and 26 percent of the cases reported for the comparable periods in 1968 and 1967, respectively. Of the nine U.S. geographic divisions, five showed a continuous increase in reported cases for each successive 4-week period (Table 5). In two of the four remaining divisions, increases were noted in the first 12 weeks, with a decrease noted in the last 4-week period. For the entire 16 weeks, four of the nine divisions and 18 states reported increases in measles cases for this period in 1969 compared with the same period last year. One of these four divisions, the Middle Atlantic, more than doubled the reported cases this year compared with last year; this division also reported an increase in 1968 over its 1967 total for the comparable period. New York City accounted for the majority of this increase. No other division recorded an increase in measles cases for these 2 successive years; however, Connecticut also recorded increases for these 2 years.

*The epidemiologic year for measles begins with week number 41 of the calendar year and ends with week 40 of the succeeding year.

(Reported by the Field Services Branch, and Statistics Section, Epidemiology Program, NCDC.)

Figure 2

REPORTED MEASLES BY 4-WEEK PERIOD, USA, EPIDEMIOLOGIC YEAR 1968-69, COMPARED WITH 1964-65 THROUGH 1967-68.

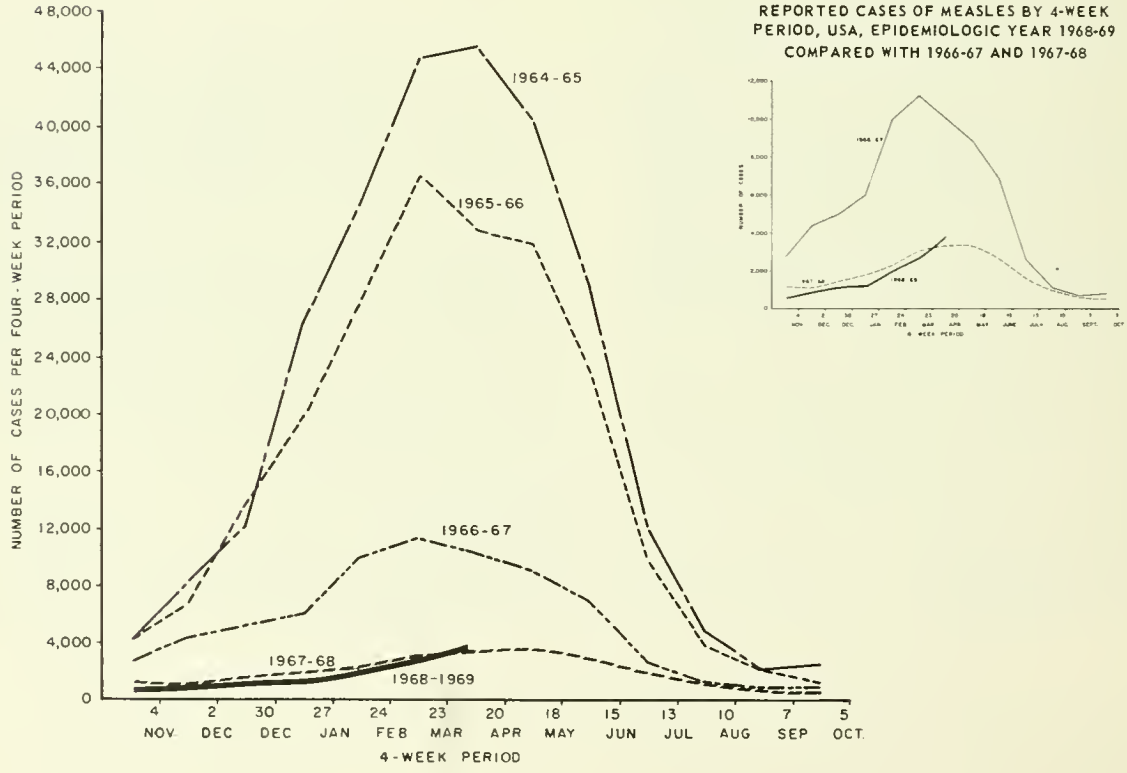


Table 5

Reported Cases of Measles, by Geographic Division, United States
First 16 Weeks 1969 and Comparable Periods, 1967 and 1968

DIVISION	Number Cases Per 4-Week Period Ended*				Total 16 Weeks Dec. 31, 1968 through Apr. 19, 1969	Comparable 16 Weeks Total		1969 Decrease (Increase) From	1968 Decrease (Increase) From
	Jan. 25, 1969	Feb. 22, 1969	Mar. 22, 1969	Apr. 19, 1969		1968	1967	1968	1967
UNITED STATES	**1,131**	**2,008**	**2,659**	**3,817**	**9,615**	**10,425**	**37,359**	**810**	**26,934**
NEW ENGLAND	**30**	**109**	**107**	**243**	**489**	**402**	**408**	**(87)**	**6**
Maine	2	–	–	–	2	13	88	11	75
New Hampshire	1	28	31	100	160	57	69	(103)	12
Vermont	–	–	1	1	2	1	21	(1)	20
Massachusetts	4	18	14	42	78	145	159	67	14
Rhode Island	–	3	–	6	9	1	27	(8)	26
Connecticut	23	60	61	94	238	185	44	(53)	(141)
MIDDLE ATLANTIC	**349**	**541**	**812**	**1,503**	**3,205**	**1,537**	**1,209**	**(1,668)**	**(328)**
New York City	213	366	568	1,078	2,225	450	200	(1,775)	(250)
New York, Upstate	36	57	80	164	337	759	286	422	(473)
New Jersey	51	40	109	117	317	266	287	(51)	21
Pennsylvania	49	78	55	144	326	62	436	(264)	374
EAST NORTH CENTRAL	**107**	**230**	**353**	**333**	**1,023**	**2,346**	**2,908**	**1,323**	**562**
Ohio	12	27	36	41	116	189	490	73	301
Indiana	26	46	121	108	301	372	341	71	(31)
Illinois	9	52	75	44	180	963	461	783	(502)
Michigan	13	30	35	27	105	146	607	41	461
Wisconsin	47	75	86	113	321	676	1,009	355	333
WEST NORTH CENTRAL	**34**	**44**	**113**	**104**	**295**	**227**	**1,670**	**(68)**	**1,443**
Minnesota	–	1	–	–	1	7	84	6	77
Iowa	14	27	64	71	176	4	388	(135)	347
Missouri	–	1	10	3	14	63	117	49	54
North Dakota	–	2	3	1	6	77	626	71	549
South Dakota	–	–	–	–	–	4	42	4	38
Nebraska	20	13	36	29	98	27	413	(71)	386
Kansas	–	–	–	–	–	8	–	8	(8)
SOUTH ATLANTIC	**233**	**374**	**401**	**484**	**1,492**	**876**	**4,285**	**(616)**	**3,409**
Delaware	1	2	19	111	133	7	27	(126)	20
Maryland	1	4	6	2	13	51	75	38	24
District of Columbia	–	–	–	–	–	6	11	6	5
Virginia	62	116	212	205	595	161	1,346	(434)	1,185
West Virginia	21	22	58	44	145	149	748	4	599
North Carolina	5	31	49	44	129	220	728	91	508
South Carolina	13	27	8	24	72	10	278	(62)	268
Georgia	–	–	1	–	1	3	23	2	20
Florida	130	172	48	54	404	269	1,049	(135)	780
EAST SOUTH CENTRAL	**19**	**9**	**16**	**5**	**49**	**260**	**3,754**	**211**	**3,494**
Kentucky	6	2	10	3	21	71	1,026	50	955
Tennessee	3	3	5	2	13	45	1,263	32	1,218
Alabama	–	–	–	–	–	45	884	45	839
Mississippi	10	4	1	–	15	99	581	84	482
WEST SOUTH CENTRAL	**265**	**571**	**633**	**798**	**2,267**	**2,756**	**13,157**	**489**	**10,401**
Arkansas	–	2	–	1	3	–	1,323	(3)	1,323
Louisiana	–	1	7	63	71	1	85	(70)	84
Oklahoma	1	100	3	1	105	101	3,232	(4)	3,131
Texas	264	468	623	733	2,088	2,654	8,517	566	5,863
MOUNTAIN	**31**	**25**	**78**	**103**	**237**	**491**	**2,713**	**254**	**2,222**
Montana	–	2	1	1	4	55	184	51	129
Idaho	–	–	29	7	36	11	295	(25)	284
Wyoming	–	–	–	–	–	42	20	42	(22)
Colorado	5	1	9	5	20	219	703	199	484
New Mexico	9	13	26	59	107	48	414	(59)	366
Arizona	16	9	12	31	68	108	628	40	520
Utah	–	–	1	–	1	3	234	2	231
Nevada	1	–	–	–	1	5	235	4	230
PACIFIC	**63**	**105**	**146**	**244**	**558**	**1,530**	**7,255**	**972**	**5,725**
Washington	2	8	17	12	39	381	3,516	342	3,135
Oregon	20	10	7	84	121	321	916	200	595
California	40	80	116	144	380	800	2,650	420	1,850
Alaska	1	6	6	–	13	–	96	(13)	96
Hawaii	–	1	–	4	5	28	77	23	49
Puerto Rico	30	58	48	117	253	209	1,249	(44)	1,040

*Includes revisions through April 19, 1969.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED
MAY 3, 1969 AND MAY 4, 1968 (18th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post-Infectious	Serum	Infectious			
	1969	1969	1969	1969	1968	1969	1969	1969	1968	1969	Cum. 1969
UNITED STATES...	24	-	4	21	12	9	112	885	796	36	834
NEW ENGLAND.....	-	-	-	-	2	-	10	64	42	-	32
Maine.....	-	-	-	-	-	-	-	2	4	-	-
New Hampshire.....	-	-	-	-	1	-	-	-	2	-	2
Vermont.....	-	-	-	-	-	-	-	1	-	-	-
Massachusetts.....	-	-	-	-	-	-	3	29	22	-	26
Rhode Island.....	-	-	-	-	1	-	3	22	10	-	-
Connecticut.....	-	-	-	-	-	-	4	10	4	-	4
MIDDLE ATLANTIC.....	7	-	-	2	2	1	35	133	100	2	91
New York City.....	2	-	-	-	1	-	27	53	2	-	8
New York, up-State.	2	-	-	-	1	-	3	25	24	-	17
New Jersey..*.....	3	-	-	1	-	-	2	20	20	2	32
Pennsylvania.....	-	-	-	1	-	1	3	35	54	-	34
EAST NORTH CENTRAL...	3	-	-	8	5	1	11	153	127	4	75
Ohio.....	-	-	-	2	1	-	1	26	41	1	10
Indiana.....	-	-	-	2	-	-	-	14	15	1	7
Illinois.....	-	-	-	1	-	-	2	37	33	-	32
Michigan.....	3	-	-	3	4	1	8	69	29	2	25
Wisconsin.....	-	-	-	-	-	-	-	7	9	-	1
WEST NORTH CENTRAL...	-	-	-	-	-	-	2	34	36	4	60
Minnesota.*.....	-	-	-	-	-	-	1	5	4	4	7
Iowa.....	-	-	-	-	-	-	-	9	7	-	5
Missouri.....	-	-	-	-	-	-	1	4	16	-	15
North Dakota.....	-	-	-	-	-	-	-	2	-	-	2
South Dakota.....	-	-	-	-	-	-	-	2	-	-	-
Nebraska.....	-	-	-	-	-	-	-	-	1	-	3
Kansas.....	-	-	-	-	-	-	-	12	8	-	28
SOUTH ATLANTIC.....	2	-	-	3	2	-	5	93	95	9	257
Delaware.....	-	-	-	-	-	-	-	1	-	-	1
Maryland.....	-	-	-	-	-	-	-	21	15	3	8
Dist. of Columbia..	-	-	-	-	-	-	-	-	-	-	1
Virginia.....	-	-	-	1	-	-	-	12	7	-	12
West Virginia.....	-	-	-	-	-	-	-	3	6	-	-
North Carolina.....	-	-	-	1	-	-	-	3	12	-	131
South Carolina.....	-	-	-	-	-	-	-	4	4	1	24
Georgia.....	-	-	-	-	-	-	-	14	22	4	64
Florida.....	2	-	-	1	2	-	5	35	29	1	16
EAST SOUTH CENTRAL...	2	-	-	2	-	1	-	49	64	-	25
Kentucky.....	1	-	-	-	-	-	-	16	26	-	20
Tennessee.....	1	-	-	1	-	1	-	20	14	-	-
Alabama.....	-	-	-	-	-	-	-	13	15	-	5
Mississippi.....	-	-	-	1	-	-	-	-	9	-	-
WEST SOUTH CENTRAL...	3	-	1	1	1	1	2	81	66	3	25
Arkansas.....	-	-	-	-	-	-	-	2	2	-	5
Louisiana.....	-	-	-	1	1	-	-	16	16	3	18
Oklahoma.....	1	-	-	-	-	-	-	7	7	-	2
Texas.....	2	-	1	-	-	1	2	56	41	-	-
MOUNTAIN.....	1	-	-	-	-	2	5	40	21	7	65
Montana.....	-	-	-	-	-	2	-	-	8	-	-
Idaho.....	-	-	-	-	-	-	-	-	-	-	1
Wyoming.....	-	-	-	-	-	-	-	2	-	-	-
Colorado.....	1	-	-	-	-	-	-	22	3	7	59
New Mexico.....	-	-	-	-	-	-	-	-	5	-	3
Arizona.....	-	-	-	-	-	-	3	7	3	-	1
Utah.....	-	-	-	-	-	-	2	8	2	-	1
Nevada.....	-	-	-	-	-	-	-	1	-	-	-
PACIFIC.....	6	-	3	5	-	3	42	238	245	7	204
Washington.....	-	-	-	1	-	-	-	35	26	-	5
Oregon.....	1	-	-	-	-	-	2	6	19	-	5
California.....	5	-	3	4	-	3	40	197	196	4	171
Alaska.....	-	-	-	-	-	-	-	-	-	-	-
Hawaii.....	-	-	-	-	-	-	-	-	4	3	23
Puerto Rico.....	-	-	-	-	-	-	-	29	10	-	1

*Delayed reports: Aseptic meningitis: Minn. 1
Hepatitis, serum: N.J. delete 4, Minn. 1
Hepatitis, infectious: N.J. delete 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MAY 3, 1969 AND MAY 4, 1968 (18th WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA
		Cumulative			Cumulative			Total	Paralytic		
	1969	1969	1968	1969	1969	1968	1969	1969	1969	Cum. 1969	1969
UNITED STATES...	949	11,549	12,018	77	1,573	1,314	2,457	-	-	1	2,511
NEW ENGLAND.....	66	603	510	7	46	69	242	-	-	-	153
Maine*.....	-	2	13	1	4	5	23	-	-	-	19
New Hampshire.....	2	166	69	-	-	7	2	-	-	-	1
Vermont.....	-	2	1	-	-	1	15	-	-	-	6
Massachusetts.*....	27	116	164	2	21	29	111	-	-	-	53
Rhode Island.....	-	9	1	-	4	6	23	-	-	-	5
Connecticut.....	37	308	262	4	17	21	68	-	-	-	69
MIDDLE ATLANTIC.....	401	4,014	1,798	13	235	215	129	-	-	-	208
New York City.....	319	2,867	596	1	41	40	113	-	-	-	59
New York, Up-State.	20	379	821	4	39	37	NN	-	-	-	46
New Jersey.*.....	32	374	314	6	102	76	16	-	-	-	11
Pennsylvania.....	30	394	67	2	53	62	NN	-	-	-	92
EAST NORTH CENTRAL...	88	1,197	2,609	11	202	138	701	-	-	-	515
Ohio*.....	31	172	221	3	71	37	18	-	-	-	53
Indiana.....	29	357	419	2	28	18	104	-	-	-	111
Illinois.....	8	202	1,052	2	35	33	66	-	-	-	56
Michigan.....	5	114	163	3	55	38	172	-	-	-	165
Wisconsin.....	15	352	754	1	13	12	341	-	-	-	130
WEST NORTH CENTRAL...	31	366	261	6	76	64	159	-	-	-	191
Minnesota.....	-	1	8	3	16	16	6	-	-	-	43
Iowa.....	24	229	51	-	10	4	119	-	-	-	110
Missouri.....	-	14	65	2	27	18	6	-	-	-	3
North Dakota.....	-	6	97	-	-	2	18	-	-	-	2
South Dakota.....	-	-	4	-	-	4	NN	-	-	-	-
Nebraska.....	6	113	28	1	9	6	1	-	-	-	30
Kansas.....	1	3	8	-	14	14	9	-	-	-	3
SOUTH ATLANTIC.....	65	1,672	992	16	280	293	181	-	-	-	393
Delaware.....	12	170	8	-	4	3	3	-	-	-	3
Maryland.*.....	14	28	59	2	27	18	32	-	-	-	35
Dist. of Columbia..	3	3	6	2	8	10	-	-	-	-	9
Virginia.....	22	682	194	-	32	21	25	-	-	-	84
West Virginia.*....	5	141	163	-	12	7	44	-	-	-	114
North Carolina.....	2	141	254	6	46	58	NN	-	-	-	-
South Carolina..*..	2	83	10	2	42	51	4	-	-	-	6
Georgia.....	-	1	3	-	42	57	-	-	-	-	-
Florida.....	5	423	295	4	67	68	73	-	-	-	142
EAST SOUTH CENTRAL...	4	60	302	5	85	106	106	-	-	-	101
Kentucky.....	1	28	76	1	25	41	57	-	-	-	22
Tennessee.....	2	15	48	2	36	33	49	-	-	-	74
Alabama.....	-	-	49	1	14	16	-	-	-	-	1
Mississippi.....	1	17	129	1	10	16	-	-	-	-	4
WEST SOUTH CENTRAL...	226	2,680	3,226	7	231	243	282	-	-	1	343
Arkansas.....	-	3	1	-	23	15	10	-	-	-	-
Louisiana.....	1	73	2	2	65	63	-	-	-	-	6
Oklahoma.....	2	108	101	-	23	45	40	-	-	-	162
Texas.....	223	2,496	3,122	5	120	120	232	-	-	1	175
MOUNTAIN.....	27	295	593	-	32	19	185	-	-	-	99
Montana.....	-	4	55	-	4	2	14	-	-	-	1
Idaho.....	-	38	11	-	5	6	7	-	-	-	1
Wyoming.....	-	-	44	-	-	-	-	-	-	-	-
Colorado.....	11	36	283	-	6	7	20	-	-	-	51
New Mexico.....	5	124	52	-	6	-	8	-	-	-	13
Arizona..*.....	10	90	125	-	8	1	123	-	-	-	30
Utah.....	1	2	18	-	1	-	13	-	-	-	3
Nevada.....	-	1	5	-	2	3	-	-	-	-	-
PACIFIC.....	41	662	1,727	12	386	167	472	-	-	-	508
Washington.....	2	45	431	1	49	27	189	-	-	-	110
Oregon.....	16	140	352	-	9	15	8	-	-	-	35
California.....	22	458	911	11	310	115	245	-	-	-	289
Alaska.....	-	13	-	-	10	-	-	-	-	-	1
Hawaii.....	1	6	33	-	8	10	30	-	-	-	73
Puerto Rico.....	60	373	255	1	9	16	29	-	-	-	12

*Delayed reports: Measles: Mass. delete 1, W.Va. delete 14
Meningococcal infections: N.J. 21, Ariz. 1
Mumps: Me. 4, Ohio 14
Rubella: Me. 9, Md. 150, W.Va. 14, S.C. 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MAY 3, 1969 AND MAY 4, 1968 (18th WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969
UNITED STATES...	10,281	1	35	1	31	12	83	5	10	80	1,413
NEW ENGLAND.....	1,499	-	-	-	-	-	1	-	-	1	5
Maine.*.....	23	-	-	-	-	-	-	-	-	1	4
New Hampshire.....	2	-	-	-	-	-	-	-	-	-	-
Vermont.....	24	-	-	-	-	-	-	-	-	-	1
Massachusetts.....	273	-	-	-	-	-	1	-	-	-	-
Rhode Island.....	88	-	-	-	-	-	-	-	-	-	-
Connecticut.....	1,089	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	465	-	5	-	1	1	10	-	-	2	38
New York City.....	50	-	3	-	1	-	6	-	-	-	-
New York, Up-State.	247	-	2	-	-	1	2	-	-	2	36
New Jersey.....	NN	-	-	-	-	-	-	-	-	-	-
Pennsylvania.....	168	-	-	-	-	-	2	-	-	-	2
EAST NORTH CENTRAL...	1,882	-	3	-	2	4	10	-	-	9	81
Ohio.....	158	-	-	-	-	2	6	-	-	9	26
Indiana.....	1,236	-	-	-	1	-	-	-	-	-	20
Illinois.....	263	-	1	-	1	1	1	-	-	-	13
Michigan.....	135	-	2	-	-	1	3	-	-	-	1
Wisconsin.....	90	-	-	-	-	-	-	-	-	-	21
WEST NORTH CENTRAL...	327	-	1	-	4	-	-	-	-	12	262
Minnesota.....	20	-	-	-	-	-	-	-	-	5	62
Iowa.....	134	-	-	-	-	-	-	-	-	2	34
Missouri.....	7	-	-	-	3	-	-	-	-	2	81
North Dakota.....	45	-	-	-	-	-	-	-	-	-	33
South Dakota.....	20	-	-	-	-	-	-	-	-	-	13
Nebraska.....	59	-	-	-	-	-	-	-	-	-	8
Kansas.....	42	-	1	-	1	-	-	-	-	3	31
SOUTH ATLANTIC.....	888	1	9	-	13	3	12	1	1	20	415
Delaware.....	5	-	-	-	-	-	-	-	-	-	-
Maryland.....	244	-	-	-	-	-	2	-	-	-	-
Dist. of Columbia..	2	-	2	-	-	-	-	-	-	-	-
Virginia.....	302	-	-	-	-	-	-	1	1	5	230
West Virginia.....	128	-	1	-	2	-	-	-	-	1	65
North Carolina.....	14	-	1	-	5	-	3	-	-	-	4
South Carolina.....	70	-	1	-	1	-	1	-	-	-	-
Georgia.....	10	-	-	-	1	2	4	-	-	4	33
Florida.....	113	1	4	-	4	1	2	-	-	10	83
EAST SOUTH CENTRAL...	1,378	-	4	-	6	2	10	2	6	11	243
Kentucky.....	196	-	2	-	-	2	2	-	-	7	138
Tennessee.....	1,024	-	2	-	5	-	7	2	6	4	82
Alabama.....	51	-	-	-	-	-	-	-	-	-	23
Mississippi.....	107	-	-	-	1	-	1	-	-	-	-
WEST SOUTH CENTRAL...	577	-	8	-	2	-	11	1	1	13	186
Arkansas.....	4	-	-	-	-	-	6	-	-	1	15
Louisiana.....	10	-	5	-	-	-	-	-	-	-	13
Oklahoma.....	23	-	1	-	2	-	-	1	1	3	31
Texas.....	540	-	2	-	-	-	5	-	-	9	127
MOUNTAIN.....	1,548	-	-	1	3	1	12	1	1	3	51
Montana.....	32	-	-	-	-	-	-	-	-	-	-
Idaho.....	134	-	-	-	-	-	-	-	-	-	-
Wyoming.....	213	-	-	-	-	-	5	-	-	2	31
Colorado.....	744	-	-	-	-	-	2	1	1	-	2
New Mexico.....	160	-	-	-	1	1	3	-	-	-	7
Arizona.....	126	-	-	-	-	-	1	-	-	1	8
Utah.....	139	-	-	1	2	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	1	-	-	-	3
PACIFIC.....	1,717	-	5	-	-	1	17	-	1	9	132
Washington.....	1,025	-	1	-	-	-	1	-	-	-	-
Oregon.....	99	-	-	-	-	-	-	-	-	-	-
California.....	530	-	4	-	-	1	16	-	1	9	132
Alaska.....	6	-	-	-	-	-	-	-	-	-	-
Hawaii.....	57	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	12	-	2	-	-	-	3	-	-	1	9

*Delayed reports: SST: Me. 4

Week No. 18

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED MAY 3, 1969

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over		
NEW ENGLAND:	659	373	38	31
Boston, Mass.	217	106	14	10
Bridgeport, Conn.	37	22	3	1
Cambridge, Mass.	19	9	6	-
Fall River, Mass.	32	21	-	1
Hartford, Conn.	59	31	-	6
Lowell, Mass.	19	10	3	1
Lynn, Mass.	17	10	1	-
New Bedford, Mass.	26	16	-	1
New Haven, Conn.	36	23	2	1
Providence, R. I.	58	34	3	2
Somerville, Mass.	14	11	2	-
Springfield, Mass.	52	34	4	2
Waterbury, Conn.	34	23	-	2
Worcester, Mass.	39	23	-	4
MIDDLE ATLANTIC:	3,313	1,900	127	137
Albany, N. Y.	45	21	1	2
Allentown, Pa.	39	22	6	5
Buffalo, N. Y.	138	84	-	8
Camden, N. J.	37	16	2	-
Elizabeth, N. J.	42	25	2	-
Erie, Pa.	45	26	2	1
Jersey City, N. J.	69	42	7	4
Newark, N. J.	77	32	2	5
New York City, N. Y.	1,684	959	63	63
Paterson, N. J.	47	28	3	3
Philadelphia, Pa.	497	286	8	21
Pittsburgh, Pa.	183	102	12	8
Reading, Pa.	46	31	-	2
Rochester, N. Y.	119	76	5	5
Schenectady, N. Y.	32	23	1	1
Scranton, Pa.	46	25	4	2
Syracuse, N. Y.	85	51	1	2
Trenton, N. J.	34	21	4	2
Utica, N. Y.	19	11	2	2
Yonkers, N. Y.	29	19	2	1
EAST NORTH CENTRAL:	2,682	1,528	101	124
Akron, Ohio	69	43	-	4
Canton, Ohio	32	23	6	-
Chicago, Ill.	795	424	40	28
Cincinnati, Ohio	158	106	4	7
Cleveland, Ohio	198	106	6	12
Columbus, Ohio	132	66	-	10
Dayton, Ohio	96	57	2	3
Detroit, Mich.	300	170	6	13
Evansville, Ind.	33	19	1	1
Flint, Mich.	43	24	-	1
Fort Wayne, Ind.	36	23	3	2
Gary, Ind.	48	27	6	1
Grand Rapids, Mich.	48	30	-	3
Indianapolis, Ind.	171	96	6	6
Madison, Wis.	46	30	5	2
Milwaukee, Wis.	145	87	1	9
Peoria, Ill.	38	14	-	8
Rockford, Ill.	45	24	6	5
South Bend, Ind.	49	29	5	3
Toledo, Ohio	118	82	2	5
Youngstown, Ohio	82	48	2	1
WEST NORTH CENTRAL:	850	526	33	53
Des Moines, Iowa	54	38	2	2
Duluth, Minn.	24	19	1	-
Kansas City, Kans.	49	29	4	6
Kansas City, Mo.	152	95	2	8
Lincoln, Nebr.	31	20	1	-
Minneapolis, Minn.	96	48	3	5
Omaha, Nebr.	76	51	1	1
St. Louis, Mo.	245	147	15	22
St. Paul, Minn.	84	54	2	6
Wichita, Kans.	39	25	2	3
SOUTH ATLANTIC:	1,204	642	44	70
Atlanta, Ga.	121	47	4	17
Baltimore, Md.	276	140	6	18
Charlotte, N. C.	61	30	-	3
Jacksonville, Fla.	62	35	1	1
Miami, Fla.	114	59	-	6
Norfolk, Va.	42	23	2	1
Richmond, Va.	98	49	7	10
Savannah, Ga.	49	26	3	3
St. Petersburg, Fla.	85	70	5	1
Tampa, Fla.	69	42	5	1
Washington, D. C.	199	104	11	9
Wilmington, Del.	28	17	-	-
EAST SOUTH CENTRAL:	682	365	30	39
Birmingham, Ala.	112	65	1	6
Chattanooga, Tenn.	60	35	6	4
Knoxville, Tenn.	36	20	2	1
Louisville, Ky.	143	84	12	9
Memphis, Tenn.	145	75	1	3
Mobile, Ala.	43	17	2	7
Montgomery, Ala.	47	26	3	3
Nashville, Tenn.	96	43	3	6
WEST SOUTH CENTRAL:	1,228	628	50	76
Austin, Tex.	38	24	2	1
Baton Rouge, La.	34	18	-	2
Corpus Christi, Tex.	32	17	-	1
Dallas, Tex.	147	76	3	12
El Paso, Tex.	47	26	5	5
Fort Worth, Tex.	89	58	5	6
Houston, Tex.	251	102	8	18
Little Rock, Ark.	78	40	7	1
New Orleans, La.	134	64	8	12
Oklahoma City, Okla.	94	52	4	1
San Antonio, Tex.	143	74	1	11
Shreveport, La.	64	39	3	2
Tulsa, Okla.	77	38	4	4
MOUNTAIN:	447	221	17	25
Albuquerque, N. Mex.	42	27	5	2
Colorado Springs, Colo.	20	12	2	-
Denver, Colo.	113	56	3	5
Ogden, Utah	26	16	-	1
Phoenix, Ariz.	110	50	2	8
Pueblo, Colo.	20	11	2	-
Salt Lake City, Utah	59	24	2	6
Tucson, Ariz.	57	25	1	3
PACIFIC:	1,691	1,003	58	71
Berkeley, Calif.	21	12	6	-
Fresno, Calif.	59	31	-	4
Glendale, Calif.	24	19	1	1
Honolulu, Hawaii	53	23	-	6
Long Beach, Calif.	97	64	5	4
Los Angeles, Calif.	524	303	18	15
Oakland, Calif.	68	41	1	7
Pasadena, Calif.	41	29	2	3
Portland, Oreg.	165	104	5	9
Sacramento, Calif.	57	30	3	2
San Diego, Calif.	119	76	2	7
San Francisco, Calif.	175	97	7	7
San Jose, Calif.	48	31	1	3
Seattle, Wash.	137	85	5	3
Spokane, Wash.	47	30	1	-
Tacoma, Wash.	56	28	1	-
Total	12,756	7,186	498	626

Cumulative Totals
including reported corrections for previous weeks

All Causes, All Ages	250,910
All Causes, Age 65 and over	145,358
Pneumonia and Influenza, All Ages	14,684
All Causes, Under 1 Year of Age	11,265

THE MORBIDITY AND MORTALITY WEEKLY REPORT, WITH A CIRCULATION OF 18,500 IS PUBLISHED AT THE NATIONAL COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA.

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MORBIDITY AND MORTALITY WEEKLY REPORT

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U.S. DEPARTMENT OF
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